

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-21. (Canceled)

22. (Currently Amended) A method of making a multilumen catheter assembly, comprising the steps of:

forming a unitary catheter tube having a distal portion and a distal end portion terminating in a distal end, a proximal portion terminating in a proximal end, and a first lumen and a second lumen ~~separated from each other by a thick integral internal septum~~, each of the first and the second lumens extending longitudinally through the unitary catheter tube; and

splitting the ~~thick integral internal septum~~ of the unitary catheter tube longitudinally along the distal end portion of the unitary catheter tube to form a first distal end tube and a second distal end tube.

23. (Previously Presented) The method of claim 22, wherein an exterior of the unitary catheter has a generally oval shape in cross section.

24. (Previously Presented) The method of claim 23, wherein the first and the second lumens have a circular cross section.

25. (Previously Presented) The method of claim 22, wherein an exterior of the first and the second distal end tubes each have a generally semi-circular shape in cross section.

26. (Previously Presented) The method of claim 22, further comprising the step of finishing an exterior of the first and the second distal end tubes so that each has a generally semi-circular shape in cross section over a portion of a longitudinal length of the first and the second distal end tubes, the first and the second distal end tubes having a generally circular shape in cross section over a remaining portion of the longitudinal length.

27. (Previously Presented) The method of claim 26, further comprising the step of releasably re-attaching to each other the first and the second distal end tubes over the portion of the longitudinal length where the first and the second distal end tubes have a generally semi-circular shape in cross section.

28. (Previously Presented) The method of claim 22, further comprising the step of releasably re-attaching the first and the second distal end tubes to one another over at least a portion of their longitudinal lengths, whereby the first and the second distal end tubes are splittable by minimal force over the releasably re-attached portion.

29. (Previously Presented) The method of claim 28, wherein the first and the second distal end tubes are releasably re-attached beginning at a point where the first and the second distal end tubes begin to extend from the unitary catheter tube and continuing over a proximal portion of their longitudinal lengths, and are separate over a distal portion of their longitudinal lengths to the distal end.

30. (Previously Presented) The method of claim 22, wherein, after splitting, a length of at least one of the first and the second distal end tubes is greater than a length of a remaining portion of the unitary catheter tube.

31. (Previously Presented) The method of claim 22, further comprising the step of grinding and polishing the first and the second distal end tubes to provide a generally smooth exterior surface to each of the first and second distal end tubes.

32. (Previously Presented) The method of claim 31, wherein an exterior of each of the first and the second distal end tubes is circular in cross section after the grinding and polishing.

33. (Previously Presented) The method of claim 22, wherein forming the unitary catheter tube is by a heat molding process.

34. (Previously Presented) The method of claim 33, wherein the heat molding process is extrusion.

35. (Currently Amended) A method of making a multilumen catheter assembly, comprising the steps of:

forming a unitary catheter tube to have a distal portion and a distal end portion terminating in a distal end, a proximal portion terminating in a proximal end, and a first lumen and a second lumen ~~separated from each other by a thick integral internal septum~~, each of the first and the second lumens extending longitudinally through the unitary catheter tube;

splitting the ~~thick integral internal septum~~ of the unitary catheter tube longitudinally along the distal end portion to form a first distal end tube and a second distal end tube, thereby creating a point of transition between split and unsplit portions of the unitary catheter tube wherein a length of the split portion of the unitary catheter tube, defined as the length from the transition point to the distal end, is greater than a length of the unitary catheter tube from the proximal end to the transition point; and

releasably re-attaching the first and the second distal end tubes to one another along a partial portion of their longitudinal lengths, the first and the second distal end tubes being releasably re-attached from the transition point to a bonding point located between the transition point and the distal end, the first and the second distal end tubes being separate from the transition point to the distal end, whereby the first and the second distal end tubes are splittable by minimal force from the transition point to the bonding point and independent and free floating from the bonding point to the distal end.

36-41. (Canceled)

42. (New) A method of making a multilumen catheter assembly, comprising the steps of:

forming a unitary catheter tube having:

an outer surface having a generally circular cross-sectional shape;

a distal portion terminating in a distal end and a proximal portion terminating in a proximal end; and

a first lumen and a second lumen separated therein by an internal septum, wherein the first lumen and the second lumen each have a generally semi-circular cross-sectional shape, and the first lumen, the second lumen and the internal septum each extend longitudinally through the unitary catheter tube; and

cutting the internal septum of the unitary catheter tube longitudinally along the distal portion to form a first distal end tube and a second distal end tube each having an outer surface generally semi-circular in cross-sectional shape.

43. (New) The method of claim 42, wherein forming the unitary catheter tube is by a heat molding process.

44. (New) The method of claim 43, wherein the heat molding process is extrusion.

45. (New) The method of claim 43, wherein the heat molding process is injection molding.

46. (New) The method of claim 42, wherein the internal septum is cut a distance from about 4 cm to about 9 cm extending along the distal portion to the distal end.

47. (New) The method of claim 46, further comprising the step of, after the step of cutting the internal septum longitudinally, cutting a length of the first distal end tube so that the first distal end tube is shorter than the second distal end tube.

48. (New) The method of claim 47, wherein the shorter, first distal end tube is between about 4 cm to 6 cm in length.

49. (New) The method of claim 47, wherein the first distal end tube is between about 2 cm to 4 cm shorter than the second distal end tube.

50. (New) The method of claim 47, further comprising the step of, after the step of cutting a length of the first distal end tube, grinding and polishing at least one of the first and the second distal end tubes by radio-frequency tipping on a mandrel to re-shape the at least one of the first and the second distal end tubes to have a generally circular transverse cross section, in both interior passageway and exterior surface, over at least a portion of a respective longitudinal length of the at least one of the first and the second distal end tubes.

51. (New) The method of claim 50, wherein the at least one of the first and the second distal end tubes is both of the first and the second distal end tubes.

52. (New) The method of claim 50, wherein the at least one of the first and the second distal end tubes is only the longer, second distal end tube.

53. (New) The method of claim 47, further comprising the step of forming a plurality of holes through the exterior surface into the interior passageway of each of the first and the second distal end tubes.

54. (New) A method of making a multilumen catheter assembly, comprising the steps of:

forming a unitary catheter tube having:

an outer surface having a generally circular cross-sectional shape;

a distal portion terminating in a distal end and a proximal portion terminating in a proximal end; and

a first lumen and a second lumen separated therein by an internal septum, wherein the first lumen and the second lumen have a generally semi-circular cross-sectional shape, and the first lumen, the second lumen and the internal septum each extend longitudinally through the unitary catheter tube; and

forming a first distal end tube having a first passageway extending longitudinally therethrough and a second distal end tube having a second passageway extending longitudinally therethrough, wherein an outer surface of the first and the second distal end tubes, and the first and the second passageways, are generally semi-circular in cross-sectional shape over a majority of a longitudinal portion thereof; and

attaching the first and second distal end tubes to the distal end of the unitary catheter tube such that the first passageway in the first distal end tube is in communication with the first lumen of the unitary catheter tube and the second passageway in the second distal end tube is in communication with the second lumen in the unitary catheter tube.

55. (New) The method of claim 54, wherein forming the unitary catheter tube and the first and the second distal end tubes is by a heat molding process.

56. (New) The method of claim 54, wherein the heat molding process is extrusion.

57. (New) The method of claim 54, wherein the heat molding process is injection molding.

58. (New) The method of claim 54, wherein attaching the first and second distal end tubes to the distal end of the unitary catheter tube is by heat molding, heat fusion, adhesive, or ultrasonic welding.

59. (New) The method of claim 54, wherein attaching the first and the second distal end tubes to the distal end of the unitary catheter tube involves applying heat to the unitary catheter tube and to the first and the second distal end tubes in a female cavity mold to create a smooth fused portion at a junction of the first and the second distal end tubes and the distal end of the unitary catheter tube.

60. (New) The method of claim 54, wherein forming the first and the second distal end tubes involves forming the first distal end tube to be shorter in length than the second distal end tube.

61. (New) The method of claim 60, wherein the shorter, first distal end tube extends about 4 cm to 6 cm from the distal end of the unitary catheter tube.

62. (New) The method of claim 60, wherein the first distal end tube is between about 2 cm to 4 cm shorter than the second distal end tube.

63. (New) The method of claim 54, further comprising the step of forming a plurality of holes through the outer surface of, and into the passageway of, each of the first and the second distal end tubes.

64. (New) The method of claim 63, wherein the plurality of holes are formed prior to attaching the first and second distal end tubes to the distal end of the unitary catheter tube.

65. (New) The method of claim 63, wherein the plurality of holes are formed after attaching the first and second distal end tubes to the distal end of the unitary catheter tube.